

VAPOR DEPOSITION OF DIHALODIALKYLSILANES

ABSTRACT OF THE DISCLOSURE

Coatings of dialkylsilyloxy groups are applied to water-wettable surfaces by chemical vapor deposition using dihalodialkylsilanes with short-chain alkyl groups. Some of the surfaces which will benefit from the application of these coatings are hydroxyl-terminated silicon surfaces of microelectromechanical systems, nanoelectromechanical systems, and biomicroelectromechanical systems, while surfaces of other chemistries will benefit as well. When applied to a microstructure on an MEMS surface, the coating reduces stiction in the microstructure. The use of the vapor phase as a deposition medium facilitates the deposition process and permits close control over the reaction conditions and the characteristics of the resulting coating.

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